REMARKS

Claims 1-10 are pending in the application. Claims 1-10 were rejected by the Examiner. Applicant respectfully disagrees.

Claims 1, 2, 4-6, 9 and 10 are rejected under 35 USC § 103(a) as being unpatentable over Parulski et al. (US Patent No. 5,914,748) in view of Brady et al. (US Patent No. 5,684,898). Applicant respectfully disagrees.

Claim 1, as amended, requires that the background image be used as an input to the probability function. The Examiner states that Parulski does not specifically state that the calculation performed during the image background determination is performed using a probability function. The Examiner relies upon Brady to show this aspect of the claimed invention.

In Brady, a probability function is not applied to the input image. In Brady, at column 8, lines 13-19, the probability function is applied to a difference image. Both Brady and Parulski use difference images, with Brady taking the added step of applying a probability function to the difference image. As amended, claim 1, does not use a difference image. The background image is used as an input to the probability function, and the probability function is applied to the original 'input image.'

In his comments, the Examiner stated that "it would be obvious to one of ordinary skill in the art at the time the invention was made to capture first the background with no foreground." Applicant disagrees. The method disclosed in Parulski of capturing first the background with the foreground object and then the second image of background only would not be operative in Applicant's invention as claimed, as the background image is needed first in Applicant's invention as claimed for the probability function that is applied to the input image. Therefore, Applicant submits that claim 1 is patentably distinguishable over the prior art and request allowance of this claim.

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With regard to claim 2, Applicant does not agree that processing each R G B layer independently is equivalent to processing in *normalized* RGB space. In addition, the combination of references does not teach refining a classification based upon a probability function applied to the first image of Parulski, as claimed in claim 1. Therefore, Applicant submits that claim 2 is patentably distinguishable over the prior art and request allowance of this claim.

With regards to claim 4-6, Parulski and Brady do not teach that the 'first image' of Parulski has a probability function applied to it, rather than a difference image, where the input image is either one frame of video data, more than one frame of video data or a still image. Therefore, Applicant submits that claims 4-6 are patentably distinguishable over the prior art and request allowance of these claims.

With regard to claim 9, the reference to the Parulski text referred to by the Examiner refers only to the first images of Parulski being of moving objects. There is no indication in Parulski or Brady that the output image could be a video. Therefore, Applicant submits that claim 9 is patentably distinguishable over the prior art and request allowance of this claim.

With regard to claim 10, the combination of references does not teach that the output image is comprised of foreground pixels, wherein those foreground pixels are classified by applying a probability function to an input image. Therefore, Applicant submits that claim 10 is patentably distinguishable over the prior art and request allowance of this claim.

Claim 3 was rejected under 35 USC § 103(a) as being unpatentable over Parulski et al. in view of Brady et al. and in further view of Gehrmann (US Patent No. 5,382,980). Applicant respectfully disagrees.

As discussed above, the combination of Parulski and Brady do not teach the invention as claimed in claim 1, much less the further limitation of claim 3. Gehrmann does nothing to

overcome this deficiency. Therefore, Applicant submits that claim 3 is patentably distinguishable over the prior art and request allowance of this claim.

Claim 7 is rejected under 35 USC § 103(a) as being unpatentable over Parulski et al. in view of Brady et al. and in further view of Jang (US Patent No. 5,825,909). Applicant respectfully disagrees.

First, the Examiner has equated the use of a noise-reduction algorithm to a smoothing operation. This is not necessarily so. Second, neither reducing the noise nor smoothing the image correlates to performing a finer classification of pixels between foreground and background. In Parulski, the noise reduction operation is applied to the difference image, which Applicant does not use. Further, Jang applies the anisotropic filter to smooth the edges of an image, not in classification of foreground/background pixel classification. Therefore, Applicant submits that claim 7 is patentably distinguishable over the prior art and request allowance of this claim.

Claim 8 is rejected under 35 USC § 103(a) as being unpatentable over Parulski et al. in view of Brady and in further view of Gardos et al. (US Patent No. 5,710,602). As discussed above, the combination of Parulski and Brady do not teach the invention as claimed in claim 1, much less the further limitation of claim 8. Again, the Examiner has equated noise reduction in a difference image to using morphological filtering applied to an input image to which has been applied a probability function. These two items are not equivalent. Therefore, Applicant submits that claim 8 is patentably distinguishable over the prior art and request allowance of this claim.

No new matter has been added by this amendment. Allowance of all claims is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office via facsimile number 703-872-9314, on June 27, 2003.

Signature
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